Single Intraday Coupling (XBID) Information Package

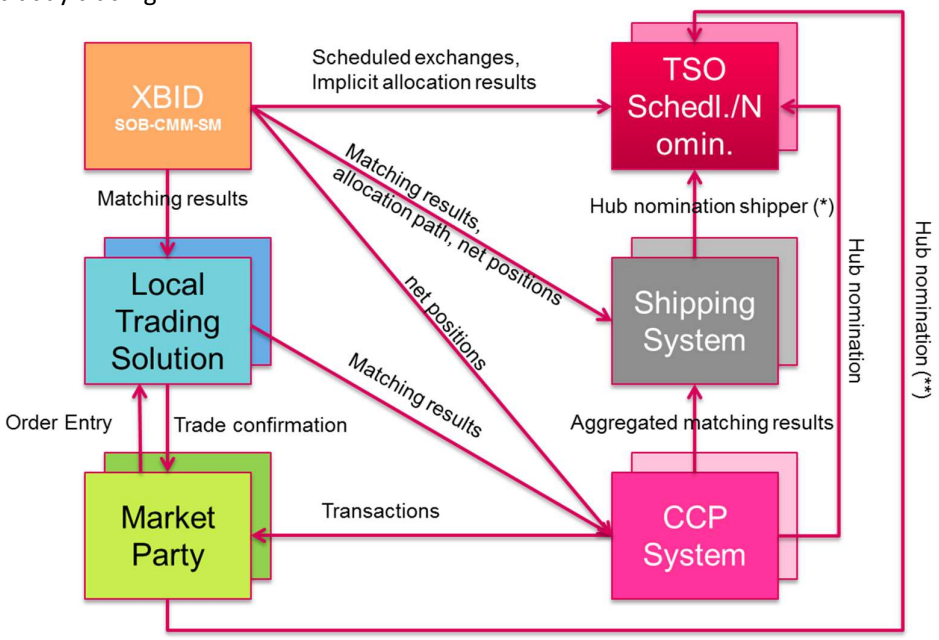
First Published February 2018
Updated December 2018 & September 2019

1. Purpose of this document

This document centralises, consolidates and comprehensively describes the necessary information which is useful for market players in order to use the Single Intraday Coupling, SIDC (formerly known as XBID) platform.

2. High level description of SIDC Platform

The XBID Programme started as a joint initiative by Power Exchanges and Transmission System Operators (TSOs) from 11 countries, to create a coupled integrated intraday cross-border market. Meanwhile the XBID Platform has been confirmed as the Single Intraday Coupling (SIDC) which shall enable continuous cross-border trading across Europe. SIDC is based on a common IT system with one Shared Order Book (SOB), a Capacity Management Module (CMM) and a Shipping Module (SM). This means that orders entered by market participants for continuous matching in one country can be matched by orders similarly submitted by market participants in any other country within the project's reach as long as transmission capacity is available. The intraday solution supports both explicit (where requested by NRAs) and implicit continuous trading and is in line with the EU Target model for an integrated intraday market. The purpose of the SIDC initiative is to increase the overall efficiency of intraday trading.



Picture 1: SIDC high-level architecture

The orders submitted by the market participants of each NEMO via the Local Trading Solution (LTS) of the respective NEMO will be centralised in the SOB. Similarly, all the intraday cross-border capacities are made available by the TSOs in the CMM.
It is important to clearly distinguish between Local Trading Solutions (LTSs) and the SIDC Solution:

- LTSs represent an interface (the only interaction point) between the Implicit Market Participants and Single Intraday Coupling (SIDC) Solution. In other words, the Implicit Market Participant may access the SIDC only via the LTS of a particular NEMO.
- SIDC Solution is a so-called backend process which does not interact with the Implicit Market Participants. SIDC Solution provides, among others, a functionality of the Shared Order Book via interaction with the connected LTSs.

Note: Explicit Market Participants have a direct technical access to the XBID Solution in order to perform explicit allocations on the German-French border, and with the 2nd Wave Go-Live on the Slovenian-Croatian border.

Order books displayed to the market participants via the LTS provided by their NEMO(s) will contain orders coming from other participants of the concerned NEMO and also orders coming from other NEMOs subject to cross-border matching, provided there is enough cross-border capacity available. Among others the NEMOs' trading systems provide the following features:

- It shows to its market participants the local view, i.e. the order book that the market participants can view in each area according to the available capacity on the borders.
- It sends the anonymized orders to the SOB (SIDC solution) received from their market participants. A 'trading solution client' is provided by the NEMOs to their market participants for their activities on the market (submit orders, receive trade information, etc.).
- It receives the required information from the SIDC solution (matching results, local view, etc.).
- It provides the required information to the market participants and to its clearing system.

Orders submitted in different market areas can be matched provided there is enough capacity available. In such a case, order matching will result in an implicit capacity allocation. Concretely, when two orders are being matched the SOB and CMM will be updated immediately. The trading principle remains first-come first-served where the highest buy price and the lowest sell price get served first. The update of SOB will mean that the orders that were matched are removed, and consequently that the available transmission capacity in the CMM will be updated. The number and location of the borders where the capacities are updated will follow the cross-border flows originated by the geographical location of the matched orders.

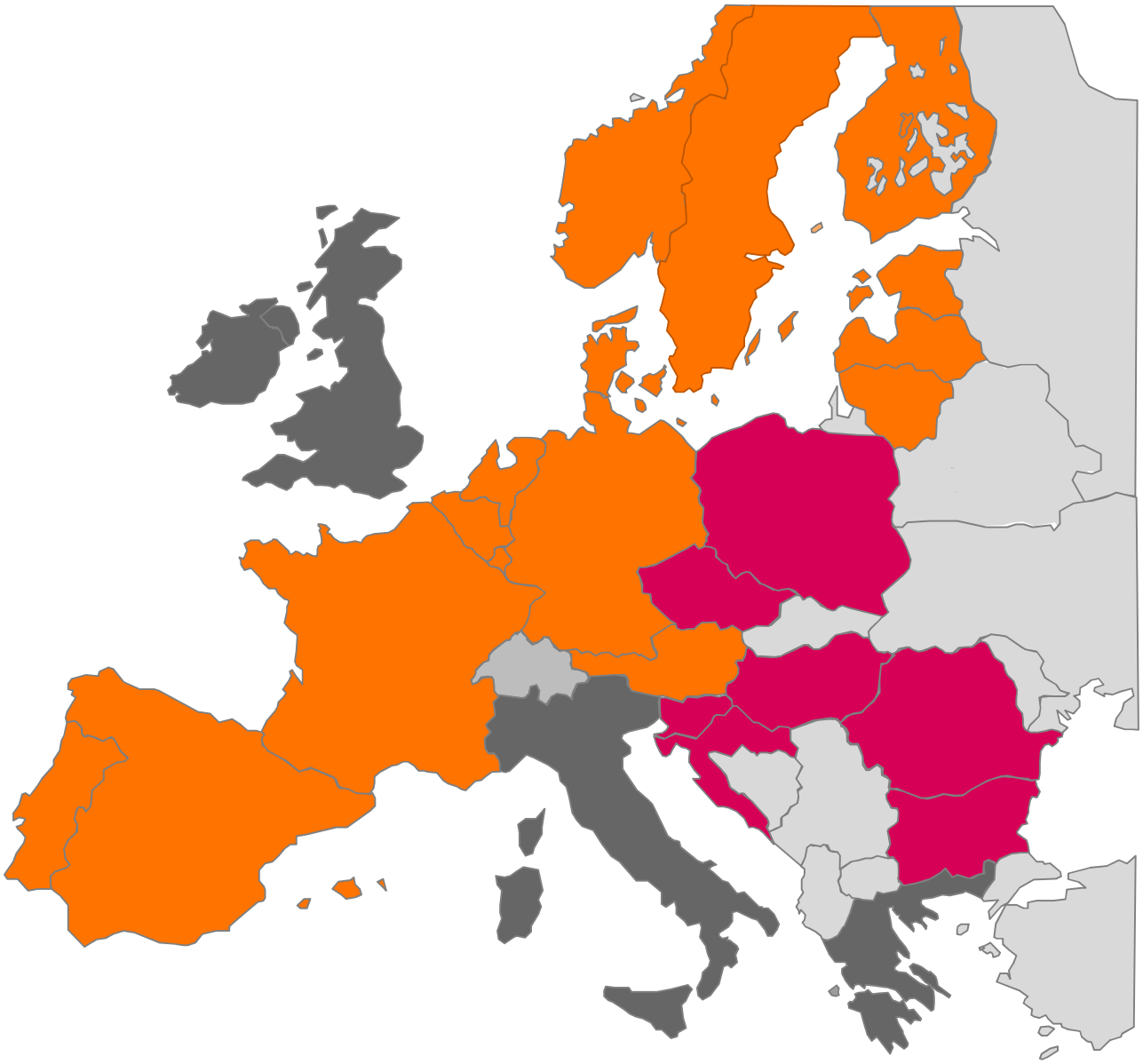
For borders where NRAs requested for it (the French/German and Slovenian-Croatian borders are the only ones requested), explicit allocation will be made available to Explicit Participants.
During the trading period, available capacities and order books are simultaneously updated on a continuous basis.

The SM of the SIDC Solution provides information from trades concluded within SIDC to all relevant parties of the post-coupling process. The SM receives data from the SOB about all trades concluded:

- Between two different Delivery Areas
- In the same Delivery Area between two different Exchange Members

3. Bidding zone borders where ID is managed by the SIDC solution

The bidding zone borders of the following countries (marked orange) are managed by the SIDC solution. Those in purple are due to go-live in Quarter 4 2019:



Picture 2: Countries coupled by SIDC solution in 1st Wave Go-Live, shown in orange (13th June 2018) and 2nd Wave, shown in purple (planned for Q4 2019)

Please note: Luxembourg is part of the Amprion Delivery Area. Market participants in Luxembourg have access to the SIDC through the Amprion Delivery Area

List of bidding zone borders:

Bidding zone borders		
BE-NL	EE-LV	NO2-NL
DE-DK1	FI-SE1	NO3-NO4
DE-DK2	FI-SE3	NO3-NO5
DE-NL	FRE-FI	NO3-SE2
FR-BE	LT-SE4	NO4-SE1
DE-FR	LV-LT	NO4-SE2
FR-ES	NO1-NO2	SE1-SE2
DK1-DK2	NO1-NO3	SE2-SE3
DK1-NO2	NO1-NO5	SE3-SE4
DK1-SE3	NO1-SE3	ES-PT
DK2-SE4	NO2-NO5	SI-HR
EE-FI	DE-AT	HR-HU
DK1-NL	CZ-DE	RO-HU
PL-DE	CZ-AT	RO-BG
PL-CZ	AT-HU	
PL-SE4	AT-SI	

4. Products offered at go-live at bidding zone borders

SIDC system supports the following products:

- 15-minutes
- 30-minutes
- 60-minutes
- Hourly User Defined Blocks

Products are configured to the SIDC solution per market area.

Specific product availability in different market areas is detailed in the table below:

		1st wave						2nd wave						
		Austria	France	German TSO areas	Iberia	NL & Belgium	Nordics & Baltics	Bulgaria	Croatia	Czech Republic	Hungary	Poland	Romania	Slovenia
Size		Min vol. Increment 0.1 MW												
Price Tick		EUR 0.01 per MWh												
Volume Range		0.1 MW to 999 MW												
Price Range		-9 999 €/MWh to 9 999 €/MWh												
Products	15-min	X		X										X
	30-min		X	X										
	Hourly	X	X	X	X	X	X	X	X	X	X	X	X	X
	User Defined Blocks*	X	X	X		X	X	X	X	X	X	X	X	X
Notes		* Hourly blocks (not 15 or 30 min blocks)												

Please note that locally traded products are not indicated in this table

Order types:

Order type	Execution Restrictions	Validity Restrictions	Predefined	User-Defined
Regular predefined	NON (None) IOC (Immediate-or-Cancel) FOK (Fill-or-Kill)	GTD (Good Till Date) GFS (Good For Session)	Yes	No
Regular user-defined block	AON (All-or-Nothing)	GTD (Good Till Date) GFS (Good For Session)	No	Yes
Iceberg	NON (None)	GTD (Good Till Date) GFS (Good For Session)	Yes	No
Basket Orders	None (1) Valid (2) Linked (3)	--	Yes	No

(1) Orders are processed as if they would have been submitted separately
(2) All orders in the basket are accepted or rejected
(3) All orders in the basket must be executed immediately with their entire quantity; all orders inside basket have the execution restriction "FOK"

The Project Parties anticipate increasing the range of products on borders. This requires forward planning including changing local systems and consultations. It is not possible to provide the answer at present but information will be provided to NRAs on this in the future.

5. Delivery hours covered by SIDC for each bidding zone border

Delivery hours are 24/7.

6. List of bidding zone borders, where intraday capacity is allocated in another way in parallel (e.g. implicit auctions, explicit allocation);

At the following borders cross-zonal capacity is allocated in another way in parallel to the implicit continuous allocation:

Germany-France (DE-FR)	Explicit continuous
Slovenia-Croatia	Explicit continuous
Spain-Portugal (ES-PT)	Implicit auctions

7. The user manual of the SIDC platform

For implicit continuous intraday trading market participants, will not connect directly to the SIDC platform. Market participants will enter their orders into the Local Trading Solution(s) of the NEMOs which is connected to SIDC.
Only for the explicit access to cross-zonal capacity at the German-French and Slovenian-Croatian borders a connection to SIDC is required.
The respective user manuals for explicit participants are published under the following links:

- http://clients.rte-france.com/lang/an/clients_traders_fournisseurs/services_clients/inter_france_allemagne.jsp
- https://www.eles.si/dokumenti
- https://www.eles.si/en/documents

8. Gate opening time (GOT) and gate closure time (GCT)

- **A. For Cross Border Allocation**

CC	Bidding Zone border	GOT as of 2nd go-live wave	Cross-border capacities published at GOT	Point in time cross-border capacity is made available after GOT (Effective GOT)	GCT as of 2nd go-live wave
Nordic	DK1-DK2, DK1-NO2, DK1-SE3, DK2-SE4	15:00 CET D-1	Calculated cross-border capacity	N/A	One hour before delivery of MTU
	FI-SE1, FI-SE3, NO1-NO2, NO1-NO3, NO1-NO5, NO1-SE3, NO2-NO5, NO3-NO5, NO3-SE2, NO4-SE1, NO3-SE4, NO4-SE2, SE1-SE2, SE2-SE3, SE3-SE4, NO3-NO4	15:00 CET D-1	Calculated cross-border capacity	N/A	
Baltics	LT – LV	15:00 CET D-1	0	As soon as possible after GOT	
	EE – LV				
	LT – SE4				
	PL –LT				
Core	DE – NL	15:00 CET D-1	0	22:00 CET D-1	
	FR – BE				
	BE – NL				
	DE – FR				
	DE – AT				
	PL – DE				
	PL – CZ				
	CZ – DE				
	CZ – AT				
	AT – HU				
	AT – SI				
	SI – HR				
	HR – HU				
	RO – HU				
Hansa	DE – DK1	15:00 CET D-1	0	18:00 CET D-1	
	DK1 – NL				
	DE – DK2				
	NO2 - NL				
	PL – SE4				
SWE	ES-FR	15:00 CET D-1 (See Note 1 below)	0	22:00 CET D-1	
	PT-ES		0	15:10 CET D-1	
SEE	RO – BG	15:00 CET D-1	0	16:00 CET D-1	

Note 1: Iberian GOT is foreseen to be switched to 15:00 CET by the End of September 2019 subject to the needed Iberian regulatory changes being ready. (Once this switch is performed the effective GOT for PT-ES border will be 15:10)

B. For SIDC Market Trading (within a Bidding Zone)

		1st wave						2nd wave						
		Austria	France	German TSO areas	Iberia	NL & Belgium	Nordics & Baltics	Bulgaria	Croatia	Czech Republic	Hungary	Poland	Romania	Slovenia
Opening times	All products	15:00	15:00	18:00	15:00**	14:00	14:00	14:00	15:00	15:00	15:00	14:00	15:00	15:00
Closing times	15-min	H-30 min		H-30 min										H-60 min
	30-min		H-30 min	H-30 min										
	Hourly	H-30 min	H-30 min	H-30 min	H-60 min	H-5 min	H-60min*	H-60 min	H-30 min	H-60 min	H-60 min	H-60 min	H-60 min	H-60 min
	User Defined Blocks	H-30 min	H-30 min	H-30 min		H-5 min	H-60min*	H-60 min	H-30 min	H-60 min	H-60 min	H-60 min	H-60 min	H-60 min
Notes	* Finland and Estonia at D-30 min ** The GOT within Iberian market will be 15:00 as of Q4 2019 (pending of regulatory decision) NOTE: The opening and closing times are SIDC/SOB system timings; individual NEMO timings might differ.													

Please note that locally traded products are not indicated on the slide

9. Documentation on the functioning of a fall back solution

In case of failure of the SIDC solution the intraday trading still remains possible internally within each bidding zone, provided local trading is offered by the NEMOs.
Measures have been taken to achieve a high SIDC solution availability and this has proved to be the case during the first 14 months of operation.
There will be no fallback option for any of the borders currently operational. The complexity of providing a fall back solution which is compliant with Multi-NEMO Arrangements (MNA) equates to delivering a project of similar cost and complexity as SIDC. Local fallback arrangements which comply with MNA do not exist and the outcome of individual Local Implementation Projects' (LIPs') assessments has therefore been that it is not possible to provide fallback other than local trading.

10. Roll-back solution

Rollback is defined as a situation where the SIDC Steering Committee is forced to decide to stop operations of the SIDC and to return to the situation before Initial Go-Live. The SIDC solution ran with stability since go-live and therefore, at the beginning of September 2018 the Steering Committee decided, in line with the contractual agreement between NEMOs and TSOs, to remove rollback systems. This was communicated at the time in a press release.

11. Algorithm Methodology and ID capacity pricing

The Algorithm Methodology including the requirements for the intraday capacity auctions have been submitted to ACER by the NEMOs on the 31st of July. The final document

- does not present the detailed principles on the governance, the details will be included in the related agreements.
- includes the timeline for the introduction of 15 minutes in the Intraday auctions
- set out the principles of the go-lives windows also suitable for intraday timeframe

ACER has now 6 months to approve the methodology.